

PAPERS READ BEFORE THE SOCIETY FROM MARCH 1903  
TO JANUARY 1904.

- 1903.
- Mar. 13. On a new and accurate method of determining time, latitude and azimuth with a theodolite. W. E. Cooke.
- On the desirableness of a re-investigation of the problems growing out of the mean motion of the Moon. Simon Newcomb.
- On three of Sir William Herschel's observed nebulous regions in *Orion*. Max Wolf.
- Proposal for the establishment of a southern belt of latitude stations. S. C. Chandler.
- On the period and light curve of 7514 *UY Cygni*. A. Stanley Williams.
- On the nebula  $\delta$  2302 (N.G.C. 7822) *Cassiopeiae*; the region surrounding  $\delta$  II. 457 (N.G.C. 1665) *Eridani*; with ten new nebulae; and on  $\delta$  III. 558 (N.G.C. 7492) *Aquarii*. Isaac Roberts.
- Observations of Comet  $b$  1902 (Perrine) from photographs taken at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.
- Note on photographs of Comet  $d$  1902 (Giacobini) obtained with the 30-inch reflector at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.
- Note on photographs of Comet  $a$  1903 (Giacobini) obtained with the 30-inch reflector at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.
- Velocity in the line of sight. Selected Stars. Cambridge Observatory, I. 1902. H. F. Newall.
- Apr. 8. Rotation period of the markings on *Jupiter*. W. F. Denning.
- A standard scale for telescopic observation. Percival Lowell.
- On the orbit of  $\Sigma$  2525. W. Bowyer.
- Note on a new star in the constellation of *Gemini*. F. A. Bellamy.
- Transits observed with the Durham Almucantar between 1901 November 23 and 1902 December 15. R. A. Sampson.

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- Apr. 8. On the place of Nova *Geminorum*. Max Wolf.
- May 8. A possible cause of the Moon's obscurity on April 11. Rev. S. J. Johnson.  
Results of micrometric measures of double stars made with the 28-inch refractor at the Royal Observatory, Greenwich, in the year 1902. Communicated by the Astronomer Royal.
- Observation of the partial eclipse of the Moon, 1903 April 11. E. M. Antoniadi.
- Expressions correctes de l'heure et des coordonnées des étoiles dans le système de l'axe instantané. F. Folie.
- Eclipse of the Moon of 1903 April 11, observed at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.
- Mean daily area of Sun-spots for each degree of solar latitude for each year from 1874 to 1902, as measured on photographs taken at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.
- Areas of faculae and Sun-spots compared with diurnal ranges of magnetic declination, horizontal force and vertical force, as observed at the Royal Observatory, Greenwich, in the years 1873 to 1902. Communicated by the Astronomer Royal.
- Observations of stars occulted by the Moon during the Eclipse of 1903 April 11, made at the Radcliffe Observatory, Oxford. Communicated by the Radcliffe Observer.
- June 12. Note on the double star 31 *Leonis*. S. W. Burnham.  
The companion to Σ 1594. S. W. Burnham.  
On the verification of the Newtonian Law. E. W. Brown.  
Note on the use of Peirce's criterion for the rejection of doubtful observations. S. A. Saunder.  
On a probable relationship between the solar prominences and corona. W. J. S. Lockyer.  
Note on the present condition of the lunar theory. E. Nevill.  
On the relation existing between the light changes and the orbital elements of a close binary system, with special reference to the figure and density of the variable star *RR Centauri*. A. W. Roberts.  
Recent observations of Mars and Jupiter. W. F. Denning.  
The spectra of Sun-spots in the region B—D. Rev. A. L. Cortie.  
Experiments as to the actuality of the "canals" observed on Mars. J. E. Evans and E. W. Maunder.

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- June 12. The great nebula in *Auriga*. Max Wolf.  
 Observations of the satellite of *Neptune* from photographs taken at the Royal Observatory, Greenwich, between 1902 November 12 and 1903 April 27. Communicated by the Astronomer Royal.
- Examination of Mr. Whittaker's "Undulatory explanation of Gravity," from a physical standpoint. G. Johnstone Stoney.
- Mean areas and heliographic latitudes of Sun-spots in the year 1902, deduced from photographs taken at the Royal Observatory, Greenwich, at Dehra Dūn (India), and in Mauritius. Communicated by the Astronomer Royal.
- Observations of the new star in *Gemini* made at the Radcliffe Observatory, Oxford. Communicated by the Radcliffe Observer.
- Further observations of the new star in *Perseus*, made at the Radcliffe Observatory, Oxford. Communicated by the Radcliffe Observer.
- Further observations of the new star in *Auriga*, made at the Radcliffe Observatory, Oxford; with the mean magnitudes for the years 1902–1903. Communicated by the Radcliffe Observer.
- On oscillating satellites. H. C. Plummer.
- The National Argentine Observatory. J. M. Thome.
- Positions of 166 stars around Nova *Geminorum*, with a discussion of the systematic differences between two exposures on the same plate. F. A. Bellamy.
- On the possible identity of Nova *Geminorum* with a small star photographed before the outburst. H. H. Turner.
- On the position of *X Geminorum*. F. A. Bellamy.
- Nov. 13. On the construction of telescopes whose relative or absolute focal length shall be invariable at all temperatures. F. L. O. Wadsworth.
- A derivation of Hill's equation by a direct substitution. R. A. Herman.
- Ephemeris for physical observations of the Moon, 1904. A. C. D. Crommelin.
- Results of double-star measures made with the 8-inch equatorial at Windsor, New South Wales, in 1902. John Tebbutt.
- Observations of variable stars made under the direction of the late Sir C. E. Peek, Bart. Edited and discussed by H. H. Turner.
- On the systematic proper motions of bright stars relatively to faint stars in the Oxford zones ( $+25^\circ$  to  $+31^\circ$ ). H. H. Turner.
- Observations of *Mars* in 1903. Rev. T. E. R. Phillips.

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- Nov. 13. Measures of southern double stars made at Shanghai, 1902–1903. J. L. Scott.
- Observations of Borrelly's Comet (c 1903) made at the Natal Observatory, Durban. Communicated by E. Nevill.
- Remarks on a paper by Mr. W. E. Cooke on a new method of determining time, latitude and azimuth. E. B. H. Wade.
- Preliminary note on the effect of the direction of gravity on lunar observations. E. B. H. Wade.
- Observations of white spots on *Saturn* in 1903. A. Stanley Williams.
- A spectrographic study of  $\beta$  *Lyræ*, Rev. W. Sidgreaves.
- On the use of the stereo-comparator for plates on which a réseau has been impressed. Max Wolf (with introductory note by H. H. Turner).
- Preliminary note on a method of photographing the Moon with surrounding stars. H. H. Turner.
- Errors in the Moon's tabular longitude as affecting the comparison of the Greenwich meridian observations from 1750 with theory. P. H. Cowell.
- On the large Sun-spots of 1903 October 4–18, and October 25–November 6, and the associated magnetic disturbances. Communicated by the Astronomer Royal.
- Note on photographs of Comet c 1903 (Borrelly) taken with the 30-inch reflector at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.
- Short method for the calculation of the orbits of celestial bodies. D. A. Pio.
- Dec. 11. The rotation period of the planet *Saturn*. G. W. Hough.
- The shower of *Leonids* in 1903. W. F. Denning.
- On graphical methods of determining the local or Greenwich time of sunset at different places within a given region. H. H. Turner.
- Observations of the *Leonid* meteors of 1903, made at the Royal Observatory, Greenwich. Communicated by the Astronomer Royal.
- On oscillating satellites (second paper). H. C. Plummer.
- An examination of the relative star-density in different parts of the plates forming the Harvard photographic sky-map. J. C. W. Herschel.
- On the semi-diameter, parallactic inequality, and variation of the Moon from Greenwich meridian observations, 1847° to 1901–5. P. H. Cowell.

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Dec. 11. Ephemeris for physical observations of *Saturn*, 1903–1904. A. C. D. Crommelin.

Two drawings of the Mare Serenitatis by John Russell, R.A., affording some hitherto unpublished evidence as to the appearance of Linné in the year 1788. A. A. Rambaut.

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Jan. 8. Cape double-star results, 1903. R. T. A. Innes. Communicated by H.M. Astronomer.

Transformation of Hansen's Tables. P. H. Cowell.

Note on the use of long-focus mirrors for eclipse work. H. H. Turner.

New double stars detected with the  $17\frac{1}{4}$ -inch reflector during the year 1903. Rev. T. E. Espin.

Ephemeris for physical observations of *Jupiter*, 1904–1905. A. C. D. Crommelin.

The rotation period of *Saturn* in 1903. W. F. Denning.

The "great" magnetic storms, 1875 to 1903, and their association with Sun-spots, as recorded at the Royal Observatory, Greenwich. E. W. Maunder. Communicated by the Astronomer Royal.

The aurora and magnetic disturbance. William Ellis.

Suggested connection between Sun-spot activity and the secular change in magnetic declination. Mrs. E. W. Maunder.

On the chromatic correction of object-glasses. A. E. Conrady.

An account of tables to facilitate the working of combined altitudes by Saint-Hilaire's method. Lieut. Simpson-Baikie.

Further note on the "great" magnetic storms, 1875–1903, and their association with Sun-spots. E. W. Maunder.

Note on Mr. Ritchey's photographs of the nebula in *Andromeda*. W. H. Wesley.